

MEET OUR NATIONAL ASSOCIATE MEMBERS: PAULO

See what makes supply chain partner Paulo an industry competitor and the similar values they've found with NTMA members. — p. 9

SPARKS FLY IN NATIONAL ROBOTICS COMPETITION

In one of two the rings set up for the double-elimination competition, two remote-controlled robots faced off. — pp. 16-17

AFFINITY PARTNER REFRESHER

Catch up on your NTMA Affinity Partners and what they can offer exclusively to you through your NTMA membership. — pp. 20-23

STATES WHICH OFFER TAX CREDITS TO EMPLOYERS FOR HIRING APPRENTICES

NTMA Pittsburgh Chapter newsletter, Precision Pittsburgh, compiled the following list of states offering tax credits to employers for hiring apprentices from state government and legislative websites. — pp. 24-25



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EMERGING LEADERS CONFERENCE 2016 RECAP

SEE PHOTOS AND READ THE DETAILS OF THE SECOND ANNUAL EMERGING LEADERS CONFERENCE IN CHICAGO JUNE 8TH-10TH. — PP6-7



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WELCOMES
NEW MEMBERS

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ships
Mr. Kevin Rochford
2505 Millennium Dr
Elgin, IL 60124

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Kansas City Chapter
Steve Finneseth
1050 SE Broadway Dr
Lees Summit, MO 64081

METALDYNE

Akron Chapter
Bill Seymour
8001 Bavaria Rd
Twinsburg, OH 44087

NEMES MACHINE CO.

Akron Chapter
Joseph Nemes
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Akron, OH 44305

NTMA WELCOMES NEW NATIONAL ASSOCIATE MEMBER

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DANLY DIE SPRING DISTRIBUTION CENTER GRAND OPENING

Danly, a subsidiary of Dayton Lamina™, a leading provider to the tool, die, metal stamping and mold industries, is opening of a new die spring distribution center in Torrance, California. This new facility houses an extensive inventory of Danly branded compression springs for immediate shipment to customers and distributors west of the Mississippi River. With extended service hours, faster delivery times and reduced freight costs, this new facility promises better service to Dayton Lamina customers in the western states.

Dayton Lamina™ is a MISUMI Group Company, with subsidiaries that are known and respected as industry leaders, including Dayton Progress and Anchor Lamina, which includes the brands Danly, Lamina, IEM, and Lempco. Their full product line includes punches, die buttons, pins & bushings, wear and guide components, die springs, cams, die details, punch retainers and more. For additional information, visit www.DaytonLamina.com.





PRESIDENT'S UPDATE

DAVE TILSTONE / NTMA PRESIDENT

Technology: (“science of craft”, from Greek τέχνη, techne, “art, skill, cunning of hand”; and -λογία, -logia) is the collection of techniques, skills, methods and processes used in the production of goods or services or in the accomplishment of objectives, such as scientific investigation. Technology can be the knowledge of techniques, processes, etc. or it can be embedded in machines, computers, devices and factories, which can be operated by individuals without detailed knowledge of the workings of such things. (From Wikipedia, the free encyclopedia)

Based upon feedback from our members, technology continues to rank high on the list of important trends affecting success and profitability of their businesses. Keeping up with all the new technologies can be exhausting and in many cases hard to discern whether new technologies are applicable to your business. The NTMA Manufacturing Technology Team helps identify and provide ways to expose key technologies and services to you from our global database of National Associate Members. The Technology Team just held their meeting in June at Kennametal’s headquarters in conjunction with AMT’s TIC (Technology Issues Committee). Kennametal hosted us and included a tour of their global technology center. Housed in their technology center are the processes and products under development, as well as equipment used in their manufacturing facilities throughout the world. It’s not only a very impressive facility, but the openness and education provided on future cutting tool technology being developed for the metalworking, mining and road construction business was amazing. During the joint NTMA and AMT meeting, various topics were discussed, including Additive Manufacturing, but the keynote was about cyber security and all it entails with regard

to data being collected in your business, and included the issue of embezzlement of funds from your company.

Without new technologies, our members and the industries they serve would not be competitive in the global market. The “technology” of 2016 has a broad reach that includes machine tools, cutting tools, software, robotics, shop floor dashboards etc.; with this in mind, it is no wonder that the 1.3 million square feet of IMTS has been sold out for months. As a result of our partnership with AMT (the organizers of IMTS) NTMA will have a booth there, located at W-207 in the West Hall, to welcome our members, showcase member benefits, and offer lounge space to rest your tired feet as well as recruit new members. IMTS is expected to attract over 150,000 visitors to Chicago’s McCormick Place from September 12th to the 17th. At the NTMA booth, we will feature a live demo of NTMAU and all the enhancements offered with the newly launched and very popular learning modules (over 1200 modules were subscribed in the spring semester and almost 1000 for the summer).

At IMTS 2016, we will again feature Tech Tours of the booths of the world’s leading providers of technology. For three days (Tuesday, Wednesday and Thursday: September 13th – 15th) we are offering organized Tech Tours of machine tool builders, cutting tool suppliers, automation and robotics suppliers etc. as a “member only” benefit. The Tech Tours are conducted by executives of the companies they represent and are intended to give you and any of your staff attending IMTS an overview of all the new technologies being introduced in a 30-45 minutes. At the time of this writing, Tiffany Bryson, NTMA’s National Accounts Manager, has already scheduled 25 Tech Tours with more to follow. A listing of the scheduled Tech Tours are as follows:

- GF
- Fives
- Okuma
- GROB
- BIG Kaiser
- SNK America
- CIMCOOL
- Paulo
- 5ME
- Makino
- Mazak
- MEMEX
- Blaser Swisslube
- Royal Products
- Global Shop
- Zeiss
- DMG MORI
- Synergy Resource
- Kennametal
- Sandvik
- MasterCam
- FANUC
- Widia

The process of signing up is easy and intended to be on a first-come-first-serve basis since space is limited. Look for the registration link coming this month to your email. Additionally, Big Kaiser is offering an early bird breakfast and Royal Products is hosting a lunch.

I encourage you to visit IMTS and take advantage of the Tech Tours at our National Associate booths. You will not only learn about new technologies but make the best use of your time while at the show. See you there!

DAVE TILSTONE / NTMA PRESIDENT



OPERATIONS & EDITORIAL

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Nikki Hunt, Writer and Publicist

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To advertise in *The Record*, or for information on publishing your corporate newsletter or sales literature, contact NTMA at (216) 264-2847 or tbryson@ntma.org for advertising, nhunt@ntma.org for editorial content. Design & layout by Z Graphics david.zablo@gmail.com



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IN MEMORIAM

RUDOLF BREDENBECK

Rudolf "Rudy" Brendenbeck, 85, of Sagamore Hills, OH, passed away May 5th. Rudy worked at Teledyne Efficient Industries for 35 years, serving as President and Chairman for 18 years. He was National President of the National Tooling and Machining Association as well as President of the Cleveland Chapter.

JOHN MARTINEZ

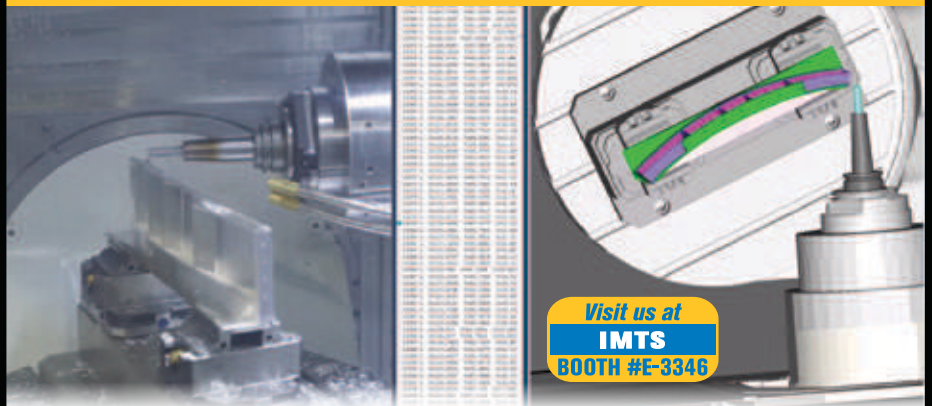
John Martinez, 61, of Denver, CO, passed away May 25th. John was Director of Sales with TCI Precision Metals for 38 years. He also served as past President of the LA Chapter of the NTMA.

FREDERICK RADKE

Frederick Radke, 92, passed away April 13th. In 1951, Frederick started his own precision machining business in partnership with his brother, Herman. He was an NTMA member and President of the Connecticut Chapter.



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EMERGING LEADERS CONFERENCE 2016 – SUCCESSFUL IN ENERGY AND OPTIMISM

The second annual NTMA Emerging Leaders Conference, held June 8-10 in Chicago, proved to be yet another successful and praiseworthy event packed with industry experts, idea sharing and networking. With sessions and topics focused on creating a stronger, healthier organization and building authentic leaders and top talent, this year's conference reaffirmed that 'We Are Manufacturing'!

The conference hosted a range of presentations from industry leaders, beginning with Rob Johnson of DMG Mori USA and his presentation on "The Art of Negotiation." Attendees were encouraged to build off of what they already know, emphasizing the power of information and preparation to foster better understanding. As Johnson says, "Understanding your audience aids in negotiation successes as most of the negotiation process happens before you even make personal contact with someone." (Just ask any attendee what their "18th camel" is!)

Erik Skie of CliftonLarsonAllen led a session on understanding the sustainability building blocks of your business, including cost structure, capacity and how you are priced in the marketplace. His message focused on how being a good financial steward is the greatest gift to give to your employees and management team. "You don't need an MBA to understand or influence your financial model, but you do need to be deliberate and align your decisions with your company values," Skie said. "Small decisions can im-

prove, as well as discredit, the quality of your profitability."

Mark Lilly of Synergy Resources then discussed multiple methods to drive improvements to price, delivery and quality to build a positive reputation. Attendees discussed the question "How do I inspire these opportunities versus forcing them in order to get everyone onboard?"

Chris Kaiser of BIG Kaiser opened up about his introduction to the industry during his youth, his young-adult successes and failures and the maturity in his family business. Kaiser also shared his best life-learned lessons – give back to the industry and your community; spend more time with people than your PC; look for different experiences & continue learning; continue to develop your leadership skills; and go ahead and take a risk! BIG Kaiser wrapped up the conference launch day by inviting everyone to a welcome reception and VIP viewing of their innovative technology at the BIG Kaiser headquarters and showroom.

The second day of the conference began with energizer exercises with Pete Honsberger of CultureShoc and an afternoon interactive panel discussion titled "Multi-Generational Workplace – Conflict and Communication" with Matt Wardle (JD Machine, Utah), Bob Mosey (Moseys' Production Machinists, California) and Mark Hollingsworth (LoSasso Integrated Marketing, Illinois). Each shared stories about management techniques, business competitive edge, and utilizing

the talents of each generation.

GF+ sponsored the day two luncheon, with a presentation from Jason Plavic of Advance Ohio on internet usage and social media, saying, "human interaction via the internet can be a very positive relationship building channel if you educate your value to your audience." The Thursday sessions closed with Ron Kaminski of CultureShoc's presentation, "Coaching for Improved Performance." Attendees shared positive feedback about the information shared and experience learning from the team-building company's CEO.

CliftonLarsonAllen hosted the "Night in Chicago" where attendees enjoyed local flare food and spirits at Five Roses, Bogart's and Hofbrauhaus, followed by live entertainment and fireworks put on by the city. CliftonLarsonAllen gave a welcome address during the first stop at Five Roses Pub then opened the night up for casual conversation and touring. The pub scenes, snacks and beverages were the perfect way to unwind and get to know fellow attendees, and was highly regarded as a conference highlight.

After a WOW Breakfast sponsored by Okuma, the company's Director of Marketing, Julie Murphy, gave a warm welcome and introduction to the final morning of conference activity. Omar Nashashibi with The Franklin Partnership delivered a comprehensive overview of One Voice and the future state of manufacturing address, emphasizing the unpredictability of the manu-



facturing climate growth. We appreciate and thank panel participants Courtney Wagner (Wagner Machine, Ohio), Mark Lashinske (Modern Industries, Arizona), Mark Vaughn (Vaughn Manufacturing, Tennessee) and Teresa Beach-Shelow (Superior Joining Technologies, Illinois) for sharing their experiences and ideas.

The conference concluded on the perfect note with an open and honest roundtable session with emerging leaders from all generations.

We give our thanks and appreciation to all event sponsors, speakers and panel participants. The Emerging Leaders Conference exemplifies how up-and-coming professionals communicate, learn and develop into future leaders and team builders. Be sure to get connected via our NTMA Emerging Leaders LinkedIn Group or contact Kelly Kasner, NTMA EL Team Staff Liaison at kkasner@ntma.org, and mark your calendar for the NTMA Emerging Leaders Conference, June, 2017, in Nashville!

We look forward to continuing the development of our emerging leaders at the NTMA Fall Conference in Charlotte, NC, October 11-14.





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Meet Our National Associate Member:



with Vice President of Sales Will Rassieur



Will Rassieur, Paulo Vice President of Sales

WHO IS PAULO?

"Paulo on the surface is a heat treating, brazing and metal finishing services company. At the core we are a supply chain partner that helps companies compete in today's competitive marketplace. We offer technical knowledge and state of the art equipment to help our customers overcome their most challenging issues, from material selection, risk assessment, failure analysis, and quality, to rapid turnaround."

WHEN DID PAULO BECOME AN NTMA NATIONAL ASSOCIATE MEMBER?

"We became a National Associate Member in 2015 but were members of various local chapters prior."

WHAT DREW PAULO TO BECOME AN NTMA NATIONAL ASSOCIATE?

"We saw excellent value in the partnerships we formed through the St. Louis and Kansas City chapters. This led us to explore ways we could meet more members and partner with similar shops to help them compete on a global level, the national membership seemed to be a great fit. We found NTMA has a lot of members with similar values and company backgrounds as ours (i.e. family owned, operate with integrity, and the desire to keep/win more work in the US).

We have also experienced some unexpected benefits. Recently we set out on a complete overhaul of our marketing material and efforts. A NTMA member company, and our current NTMA president, Homeyer helped us in selecting a marketing firm. Paulo holds memberships with several organizations and I have to say NTMA has some of the most welcoming members."

WHAT PRODUCTS/SERVICES CAN PAULO OFFER SPECIFICALLY TO NTMA MEMBERS?

"Paulo offers commercial heat treating, brazing and metal finishing services. However, we are always looking to expand the services we offer. Having employees participate as active members on ASTM and NADCA boards, we routinely find our experts involved with spec changes and providing consulting for our customers."

WHAT INDUSTRY INITIATIVES DOES PAULO SUPPORT?

"We have been attending national meetings and Sales & Marketing Workshops. We are looking forward to engaging with the NRL next season as the official Heat Treater and being more involved with emerging leaders."

WHERE CAN NTMA MEMBERS MEET PAULO IN 2016? (TECHNICAL SEMINARS, FALL CONFERENCE?)

We hope to see everyone at the Fall Conference in

Charlotte where we will sponsor the "moonshine" experience, should be a good time. Last year we were a sponsor at the Fall Conference in St. Louis, our headquarters, which was great time. We also plan to attend the Sales & Marketing Workshop in the fall. In addition to NTMA events, we will also exhibit at IMTS, it would be great to have some NTMA members stop by our booth, number N-6373."

WHAT HAS PAULO LEARNED FROM NTMA MEMBERS?

"We have learned that this organization is very passionate about keeping America great. They believe in a message that is far beyond the walls of their individual facilities. This message

expands from giving our youth opportunities in manufacturing, to educating our country on what manufacturing is all about, to keeping our country a competitive global player."

ONE LAST THING...

"We invite everyone to come check us out, whether that is through our website, at the next NTMA meeting, or the next time you are near one of our five locations. We would love to learn more about the issue your company is facing and be a critical player in helping you become more competitive in the marketplace, that's what we do."



Online Membership Directory

This is the first year NTMA has offered our members an interactive online membership directory giving advertisers the opportunity to change out their ad and receive monthly updates through E-Trends. In order to be able to provide our members with tangible data, Bluebird, NTMA's Marketing Consultant, added Google Analytics to the directory to track this data. Here's a look at our most recent 2016 data. For advertising opportunities in the 2017 directory, please contact klamarca@ntma.org.

What does the data tell us?

4,334
individual
page visits

1,100 page
visits/
month

3,535 unique
page views

883 unique
page
views/month

What pages are visited the most?

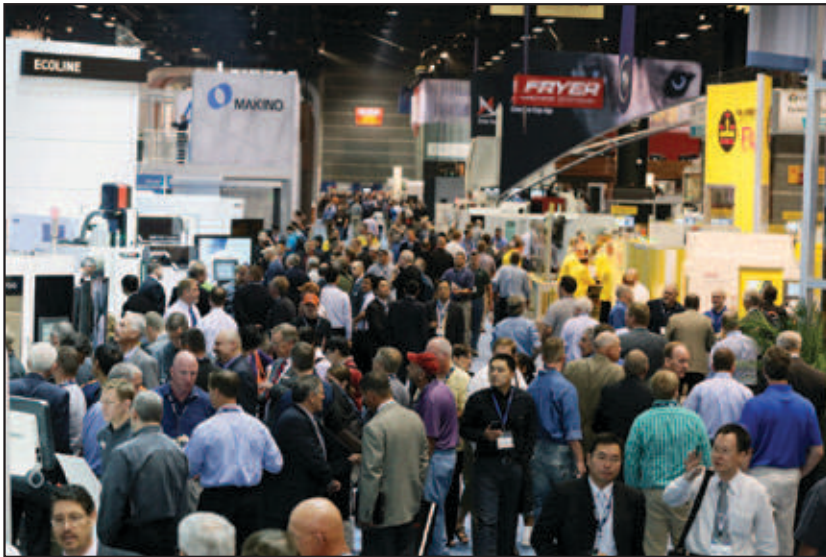
- Pg. 138 – 2017 New Members
- Pg. 2 – New Mexico Chapter
- Pg. 6 – St. Louis Chapter
- Pg. 20 – Homeyer Precision
- Pg. 36 – Programs & Services
- Pg. 16 – FANUC Ad

Tech Tours!



IMTS2016

Overwhelmed? Feeling lost in the crowd?



Let NTMA lead you to the world's top technology leaders!

The IMTS NTMA Tech Tours are an NTMA member only benefit that are powered by the NTMA Manufacturing Technology Team. These Tech Tours allow you to skip the sales pitch and focus on the technology through lunch and learns, pre-show breakfasts, post show events, cocktail hours and more. These Tech Tours are a great way to enhance your IMTS Show experience and we encourage all NTMA members to take part in them.

Who: NTMA Members ONLY

What: Intimate, distraction free, C-Suite led tours with our top technology partners, guided by NTMA President and National staff

Where: IMTS
(International Manufacturing Technology Show)
McCormick Place, Chicago

When: NTMA Tech Tours
September 13th -15th, 2016
The IMTS Show runs from Monday, September 12th through Saturday, September 17th.

Why: Peer to peer networking
Industry expert networking
Exposure to a variety of manufacturing industry segments
Chance to grow your network through 1 on 1 meetings
Sneak peek at new technologies

Dave Tilstone, NTMA President, has listed the following as just some of the few reasons to consider attending the NTMA Tech Tours at IMTS:

- Make high level contacts with the executives that provide the booth tours.
- Meet and discuss technologies and opportunities with like minded business owners.
- Make the most of your time at the show with scheduled tours lasting 45 minutes to one hour. These tours highlight new technologies pertinent to members' businesses.
- See new technologies that may not be known or readily available through their local machine tool distributors.
- Participate in networking and educational sessions offered by National Associates.
- Learn about industry trends that may impact your business/strategy.

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REACHING UP

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- Super slim nose diameters provide outstanding tool clearance

THE MILLION SOLDIERS WE'RE LEAVING BEHIND

BY STEVE NOWLAN, PRESIDENT, CENTER FOR AMERICA



One hundred years ago this month at the Somme in France, my friend's father, "Reggie", followed his unit captain and thousands of other troops over the top of their trench and straight into enemy fire. They were pushed back with bloody losses. Realizing his captain didn't return, Reggie immediately made the perilous trek to find him, which he did, far into "No Man's Land." Reggie carried him back amidst a hail of fire, taking many wounds that nearly killed him. Both were transported on the edge of life back to hospital in England where newspapers told of Reggie's heroism with headlines, "The Man They Couldn't Kill." After his recuperation, the British Royal Family honored Reggie – despite his disabilities – with employment as a senior government aide, where he served with distinction.



While there are perhaps hundreds or thousands of similar heroic and remarkable stories about our U.S. service members "leaving no soldier behind", I'm sharing this one because it was told to me when I was very young and has stayed with me as a guide my own conduct in life.

Of course, the determination to leave no soldier behind is built into the DNA of our military. They demonstrate it in combat conditions, and countless First Responders and civilians facing crisis situations likewise demonstrate that commitment every day.

That said, let's consider that there are one million veterans looking for full-time jobs to transition out of the military, and another 200,000 newly-minted veterans trying to join the civilian workforce every year. Let's consider that these men and women comprise one of the most highly trained, tech savvy groups of disciplined go-getters in the so-called labor pool.

With skill shortages cited by most industries as a key reason they can't grow,

isn't it timely to consider why employers saying they can't find or aren't hiring these men and women when they need to find jobs to support their families? Too many are being "left behind."

Several years ago, I had an epiphany about our one million vets looking for jobs. I was taken by my friend to the Eton campus just down the road from Windsor Castle. As we walked through the colonnade at Eton, on the wall there were bronze plaques spelling out the hundreds and hundreds of names of virtually all the graduates of Eton during the 1914-18 war who were killed. "One answer," he said, "to the question of why Britain was adrift in the 1920s and 30s, is because Britain lost the best of our youth who would have become the leaders of industry, arts, sciences and government. Right across the country, a whole generation was lost to us."

My thoughts came back to our million-plus veterans who are not getting the positions in American industry from which they will grow to become our nation's most effective leaders in years to come.

With all the government agencies, non-profits, veterans' groups and big companies that are offering help to veterans to get jobs, what are the reasons why we are leaving one million of them behind?

Actually, the reasons are very basic.

1. While most communities and states have employment assistance programs to help veterans, very few of these organizations actually talk and work with each other to develop the type of joint programs that will lead to more hiring. Most are operating in silos, serving narrow constituencies, and don't provide truly effective service to the majority of candidates or employers. Many employment counselors have no training or experience to properly assess veteran skills and just send out job postings in bulk.

2. Most veterans coming out of the service have little understanding of what types of jobs are being offered by companies. Most find the avalanche of job postings to be overwhelming, especially after coming from a military culture that they understand, and which has much more transparency about careers than employers generally provide.

3. Most veterans go through 20 to 30 interviews with company recruiters – when

they are not rejected by computerized application systems that disqualify veterans unfairly because the systems assign negative points to various aspects of military experience due to poorly designed software. The interviews with recruiters – most of whom have had no military experience – are often inept and disrespectful because many recruiters have no idea how to relate military experience to civilian jobs. They often fall back on "what MOS certificates do you have" and ignore all other experience and training as if it counts for nothing.

4. Many employers and many HR recruiters rely nearly completely on job postings to attract veterans, and when veterans don't apply (because they don't know anything about your industry, your company or how the job relates to their military training and experience), the HR teams report to management that "we tried but no veterans applied so we assume they aren't hungry enough for jobs."

These are not the only reasons that many distinguished veterans are left to ask their parents to live at home because they cannot find jobs. However, the common denominator is a lack of active engagement and outreach on the part of all the organizations and leaders that have some role in getting veterans into jobs. Certainly there are many models across the country of communities and organizations that have overcome these problems and they are doing great work.

However, the very fact that there are one million veterans still looking for full-time jobs is clear evidence that as a nation, there is a lot more effective work to be done at the local and state levels.

Business and trade associations can set up information, training and networking programs for their employer members to increase their understanding of the best ways to find and hire veterans, and organize gap training programs to provide any learning that veterans need to qualify for specialized jobs. Associations can review how they educate veterans about the opportunities in the industry. (Recycled materials aimed at recent college students are generally not effective.)

Employers can and should review their own procedures and skills in screening and interviewing veterans and the steps they

take to clearly state for all employees that the company attaches high priority to hiring veterans. Employers can also ensure that some marketing materials are tailored to veterans.

Nonprofits and government agencies can upgrade the skills and expertise of their staff in knowledgeable working with veterans – and streamline their procedures for working with employers to ensure that quality of service is just as important as the monthly number of contacts.

Most of these and other action steps we can take in our own organizations are not expensive, they are easy to implement, and they certainly hold the promise of leaving no one behind. These are the things we can do – now – to fulfill our responsibilities to the men and women of the military who have put their lives on the line to protect our country. Wouldn't it be great to look forward to Veterans Day in November knowing that we have pushed just that much more to make a real difference in reducing veteran unemployment?

Steve Nowlan is president of Center for America, the nonprofit coordinating the American Jobs for American Heroes campaign, a national initiative to help hire veterans, National Guard members and Reservists. Email: SNowlan@CenterforAmerica.org <http://www.CenterforAmerica.org/register.html>



MAY WORKFORCE DEVELOPMENT ROUNDTABLE RECAP

Members from OH, PA and AZ came together for the Workforce Development Roundtable held May 20th in California, PA. The day featured five sessions, including the opening keynote, “Manufacturing Workforce Development Playbook: Your Resource for Advancing Your Company’s Renaissance,” “How to Sleep Better at Night: Turning Workforce Recruitment into Your Biggest Asset,” and “Preparing Your Shop for

the Future: Will You be Able to Compete in the Marketplace Five Years from Now?”



Held in conjunction with the NRL Competition, the roundtable also offered attendees the opportunity to experience this innovative program and see the student robots in action. Phyllis Miller, HR Manager at Hamill Manufacturing Co., called it an “excellent day! Very worthwhile!”



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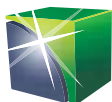
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GROB's G-Series line of stand-alone, 5-axis machining centers excel in today's demanding automotive manufacturing

landscape because they are engineered to ensure reliable, high-performance production with many extra features as standard.

The company's wide product portfolio is rooted in GROB's dedication to vertical integration in machine manufacturing. GROB manufactures virtually all components in Germany or the U.S., including the spindle, swivel rotary table and tool magazine. Of these components, GROB's horizontal spindle features a retractable design that gives manufacturers the ability to use long tools without any risk of collision between the spindle and part or fixture. This design allows for a smaller footprint than other brands—without reducing workpiece capacity or part clearance.

Pair the spindle with a 360-degree table capable of 225 degrees of rotation in the A-axis to reduce maintenance. The allows for a complete inversion of the part—an optimal setup for upside down machining. Chips just fall away from the part.

While most machining centers require significant clearance behind the machine to install and remove the chip conveyor, the GROB machine is self-contained with chip conveyor and high-pressure coolant units built right into the machine base. This setup makes the machine easy to move into place, and requires less floor space.

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NTMA members are invited to visit GROB Systems at IMTS Booth No. S-8574 to learn more about G-Series Universal Machining Centers and a full range of automation solutions.

Email jzerkel@grob systems.com for complimentary exhibition passes or to pre-schedule a booth tour.



Bill Vejnovic is the Vice President of Sales for Universal Machines at GROB Systems in Bluffton, Ohio. After starting his career as an NC programmer, Mr. Vejnovic spent nearly 30 years in engineering management and executive positions with major machine tool builders. Throughout his career he has managed new product development as well as process and applications engineering for end users. Mr. Vejnovic continues to guide the development of 5-axis machining centers, automation systems and software at GROB Systems. He currently serves on the Technology Team for the National Tooling & Machining Association (NTMA).

Contact Bill: wvejnovic@grob systems.com

A family-owned company, GROB Systems is among the world's largest machine tool builders with a full range of production and universal machining centers manufactured in Bluffton, Ohio as well as Germany, Brazil and China.

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SPARKS FLY IN NATIONAL ROBOTICS COMPETITION

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In one of two the rings set up for the double-elimination competition, two remote-controlled robots faced off. Sparks flew when they clashed, and finally, the bout was stopped due to “smoke and fire,” the emcee announced to the auditorium.

“That’s going on the website,” Bill Padnos said to a cheering crowd.

The winner of that round was a team from Beaumont School, an all-girls school in Cleveland Heights, Ohio. They were one of 63 teams to participate in the National Robotics League competition held this year at California University of Pennsylvania. The competition drew teams from seven states and Puerto Rico.

The bouts alternated between two rings, where battle bots went head to head in a gladiator-style competition and, frequently, flipped each other around like pancakes.

In the end, it was Pine-Richland High School in Pine Township whose robot, The Punisher, battled to grand champion honors. A trophy and \$500 prize goes to the team with the highest combined score. First place went to Conchranton Junior-Senior High School and their bot, Juggernaut, in Meadville. Second place went to Carnegie Mellon University’s Disko. Third place went to Ebensburg’s Admiral Peary School District and their bot, The Joker.

After their round, the Beaumont team could be found in the pit behind the stage, with their bot “Stobor” opened up for repairs before the next fight. The name is “robots” spelled backward “because we reverse engineered the robot,” said Margaret Schiffer, a junior.

Developing Stobor took seven months, with the team working with their sponsor Christopher Tool Manufacturing in

Cleveland, to use equipment and other resources they may not have access to. One member of the team drives, while the other operates the weapon.

One local team from Plum School District worked with Jennison Corp. in Carnegie for their robot, Knockout. They retired their last one Still N Shock after last year’s competition in Cleveland.

“This one is smaller and faster,” said Joe Doerfler, a senior at Plum High School. He said he is going on to The University of Pittsburgh at Greensburg to study mechanical engineering.

The National Robotics League is a program under the Cleveland-based National Tooling and Machining Association that encourages students to explore Science Technology Engineering and Mathematics, or STEM-related, subjects. Students design and engineer their robot and have to provide extensive documentation of their process from conception on.

The program also fosters connections between students and manufacturing companies that are in need of skilled workers, especially as the industry braces for a wave of retirements and a shrinking pool of young workers to fill in the gaps. And that’s even taking into account jobs that can be performed through automation, said Steven Tamasi, NRL commissioner.

The organization cites a Deloitte study for the Manufacturing Institute stating that the country faces a need for nearly 3.5 million manufacturing jobs over the next decade.

“This promotes STEM education in a way that’s fun where they can be more engaged, and, in some cases, not intimidated by science or math,” Mr. Tamasi said. “The kids aren’t really thinking about physics as they’re doing

this. They’re figuring out how their robot can beat another one.

“They flip each other like quarters in the ring,” he said.

Students from South Park School District, like many others, also had their robot open up for repairs between fights. Julietta Maffeo, a junior, and Sam Hartman, a sophomore, were bent over the machine with tools in hand.

The team worked with Durametal Products in Irwin to develop their bot, The Millenium Falcon — armed with a metal disk with large teeth.

While most of the participants came from schools in Pennsylvania and Ohio, some came from as far away as Arizona and Puerto Rico.

The students from the University of Puerto Rico took it upon themselves to revive interest in the competition after the last team graduated and there was a lull in interest.

“There are no regional competitions like this in Puerto Rico, so it’s the NRL competition,” where the team gets to see how the robot, Carey, performs in the ring, said Reinaldo Alciade. The name is in tribute to an endangered turtle species in the Caribbean, they said. They worked with GM.

Alberto Rosado said the team is trying to get more interest from other schools to start up similar robotics programs on the island.

He pointed to the binder on the work table with their documentation and noted they want to be able to pass on their knowledge to other students. “We don’t want them to have to re-learn everything, but to keep improving on the base we created and take it to new heights.”

“We don’t want this to die off after we graduate,” said Mr. Alciade.







WESTERN LAKE ERIE CHAPTER APPRENTICESHIP GRADUATION

WESTERN LAKE ERIE CHAPTER

The Western Lake Erie Chapter is proud to be the home of one of the regions premiere metalworking apprenticeship training schools. With class sizes of 15-24, students receive a one-on-one experience with the instructors, hands on training in the shop, and peer-to-peer work in the classroom. The US Department of Apprenticeship approved program consists of 576 hours of classroom time beginning with basic algebra and geometry and leading into more advanced subjects of machining theory and blueprint reading. Students spend the entire fourth year studying MasterCam. Operating out of a local high school machine shop,

classes are instructed in the evenings for four hours.

The school is supported by the Western Lake Erie Chapter. Chapter events such as the Annual Manufacturer's Golf Outing, dinners, and workshops all support the school. Recently, the school was awarded a grant from the John Bates Foundation for twenty thousand dollars to purchase new computers that will be used to run the MasterCam program for fourth year students. The continued support of the John Bates Foundation is a great asset to the school.

The growth of area shops has led to continuously in-



creasing enrollment numbers. The 2015-2016 school year had such high enrollment for new incoming students that the class had to be split to meet on two separate evenings. Just last month, fifteen students received their certificates of completion at the annual ap-

prenticeship appreciation night. It was the largest graduating class in many years! The annual event is a celebration of the hard work of the students and the shops who support them.



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To learn more about NTMA's preferred pricing and more about Heartland,

CONTINUED ON PAGE 22

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MULTIVIEW®

In 2011, NTMA set out to simplify product sourcing with the launch of its online supplier directory, the Manufacturing Supplier's Guide. By using innovative search technology, the directory made it easier for tooling and machining professionals to find the products and services they need. It was quickly declared a valuable resource—while eliminating the clutter that goes into the average Internet search.

With its latest product release, the Manufacturing Supplier's Guide has become even easier to use with smart functionality improvements and a major user interface redesign. We have not only enhanced its existing features, but added several new key elements taking the user experience to a whole new level. Here's a list of what's new and exciting with the new Supplier's Guide:

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No more scrolling, no more zooming—the Manufacturing Supplier's Guide will react to your screen size. For the first time ever, responsive design will optimize the user's browsing experience by creating a flexible and responsive Web page, optimized for the device that is accessing it—from your desktop to your tablet to your mobile phone.

SEARCH MADE EVEN SIMPLER

Visitors will now be able to find the products and services they are searching for much more easily. With its newest organization of headings and categories, this guide will be a one-stop shop for whatever it is they might need. Its clean and concise layout is easy on both the eyes and mind.

AND A SEARCH—WITH PURPOSE

We have modified the guide to move at the faster pace of today's business environment.



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THE FUTURE OF PRODUCT SOURCING IS HERE TODAY

The NTMA Manufacturing Supplier's Guide provides a platform to help you work smarter, not harder. With enhanced features and more intelligent search technology, there is no better way to connect tooling and machining professionals with the suppliers they need.



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The NTMA Shipping Program, managed by PartnerShip®, is a comprehensive inbound and outbound shipping program that provides NTMA members with simple and affordable shipping solutions. As the NTMA-endorsed shipping management provider, PartnerShip works with nationally known carriers to offer unparalleled customer service and significant savings with FedEx, UPS Freight, YRC Freight, and other reputable carriers.

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THE DEFEND TRADE SECRETS ACT: WHAT YOU NEED TO KNOW

BY GERALD CHATTMAN OF BUCKINGHAM, DOOLITTLE & BURROUGHS

President Obama signed the Defend Trade Secrets Act (DTSA) into law on May 12, 2016 creating a fourth category of federally protected intellectual property (along with trademarks, patents and copyrights). The DTSA amends the Economic Espionage Act of 1996 (18 U.S.C 1832), which criminalized trade secret theft, to finally create a federal civil cause of action for trade secret misappropriation. Until now, trade secrets as a civil matter were only protectable under state laws which not only varied, but created jurisdictional issues. In addition to existing state law remedies, trade secret owners may now file suit in federal district courts under a nationally uniform

law without having to worry about jurisdiction. While the DTSA does not preempt any applicable state laws, it does provide a uniform set of tools for businesses and intellectual property owners to use against misappropriations.

DEFINITIONS

The DTSA defines trade secrets broadly to comprise secrets "related to a product or service used in, or intended for use in interstate or foreign commerce." Now covered are "all forms and types of financial, business, scientific, technical, economic, or engineering information," no matter how the information is stored. As long as the information is secret, the owner took reasonable measures to maintain that secrecy, and economic value is derived from the secrecy, the DTSA applies. The DTSA considers misappropriation generally as either acquiring a trade secret by someone who knows or has reason to know that it was improperly acquired, or the disclosure or use of a trade secret without permission under circumstances generally involving a violation of a duty to maintain secrecy or other improper acquisition.

REMEDIES

The DSTA provides powerful new protections to trade secret owners. There is now a civil seizure provision that permits ex parte seizures for plaintiffs enforceable by Federal, State, and/or local law enforcement agencies. Essentially government agents may now seize misappropriated trade secrets without warning or notice to the defendant. Additionally, Courts may grant reasonable injunctive relief, compensatory damages, punitive damages, and even attorney fees under certain circumstances.

Impact on Trade Secret Owners

The DTSA is in effect as of the day of signing creating some immediate action items for trade

secret owners. This is an opportunity for businesses to review their trade secrets and associated policies and protections. Most importantly, the DSTA creates a "whistle blower" policy to protect against civil or criminal liability to those confidentially disclosing a trade secret to a government official or attorney for the purpose of reporting a violation of the law. This creates an immediate affirmative duty for businesses to provide notice of the new immunity provision to employees, likely including independent contractors and consultants.

ACTION ITEMS

Employers should at a minimum:

A) Review and update policies, procedures and employment agreements to comply with DTSA whistle blower and retaliation provisions;

B) Consider immediately drafting a "cross-reference" policy document for current employees to comply with the DTSA whistle blower and retaliation provisions;

C) Develop a trade secret protection plan that takes appropriate steps to protect trade secret information, such as properly drafted and updated confidentiality agreements, employee contracts, vendor contracts, a program to limit the dissemination of protected information, and confidentiality markings on documents;

D) Determine procedures for proper reporting of suspected violations of the law;

E) Consider the DSTA's impact on potential new hires of a competitor's employees and post-employment restrictions on current employees;

F) Review the advantages and disadvantages of the DTSA compared to state law options.



2016 NATIONAL EVENTS AND TECHNICAL SEMINARS

September 12th-17th
IMTS, Chicago, IL

September 28th
Sales & Marketing Workshop, Philadelphia, PA

October 11th
Financial Managers Roundtable, Charlotte, NC

October 12th-15th
Fall Conference, Charlotte, NC

October 26th
Plant Managers Roundtable, Boston, MA

November 2nd
Sales & Marketing Workshop, TBD

November 2nd-3rd
Supply Chain Network Fair, TBD

November 16th
Plant Managers Roundtable, Denver, CO

A FOCUS ON APPRENTICESHIPS... LOCALLY AND STATEWIDE

AN INTERVIEW WITH GREG CHAMBERS REPRINTED FROM THE PITTSBURGH
CHAPTER NTMA NEWSLETTER, PRECISION PITTSBURGH



“We are actually living and dying by our apprenticeship program and our hiring practices... In contract manufacturing, all of your people have to be good,” said Greg Chambers, the director of corporate compliance at Oberg Industries in Freeport, Pennsylvania, a company he’s been a part of for 32 years.

Chambers stays focused these days on apprenticeship programs— both the apprenticeship program at Oberg Industries and apprentice programs state-wide as a member of the Pennsylvania Apprenticeship and Training Council.

Long recognized as a leader for its apprenticeship program, Chambers is part of a team that oversees the program at Oberg. Oberg began training people when it opened the doors back in 1948 and actually registered their first occupation in 1971. Today, the company has 19 occupations registered with the state of Pennsylvania and has 51 apprentices in its program. All 19 occupations aren’t populated right now, but having these options available makes Oberg more agile because employees can be enrolled in or transferred between programs at will. Like many of the shops in the Alle-Kiski Valley, Oberg is a contract shop. This means they need to be able to pivot quickly to meet a need.

“You’re not only preparing the program to develop your people for today, but you’re also preparing the process to meet your needs of the future... You must make your program robust enough to enable you to move people to a different occupation if needed. You may find you have a need in an area you weren’t targeting them for. All of your apprenticeable occupations should be like the spokes in a wheel, so that you have a common core and can go down one spoke or another as you have a need.”

According to Chambers, there’s nothing magical about Oberg’s approach. They are aligned with the National Institute of Metalworking Skills (NIMS) performance standards and the NIMS framework, but add their own touches to personalize their programs.

Oberg’s apprentice program is focused

on competency. However, the state of Pennsylvania does not recognize a total competency-based approach so Oberg adds time requirements to create a hybrid approach to apprenticeship. Oberg can hire people with no experience for their apprentice training, and all training is done on the clock. Apprentices earn college credit for their work and earn a college certificate when they graduate. Additionally, Oberg offers tuition reimbursement to employees who earn a B or better in work-related college classes outside of the apprenticeship program.

“We do not do things just in the short term, we do things with a long term view and sustainability in mind,” Chambers said.

Recognizing Oberg’s commitment to apprenticeships, Chambers was commissioned by Governor Tom Corbett to serve on the Pennsylvania Apprenticeship Training Council as an employer representative. At the time, there was no other employer representative from advanced manufacturing, so Chambers brought a new voice to the table. This council establishes policy, registers programs, and performs quality audits to keep the state aligned with the federal office of apprenticeship. The Council also addresses some strategy, as well.

From this vantage point, Chambers notices that registered apprenticeship programs are gaining the spotlight nationally. Apprenticeship programs are being recognized from both sides of the political aisle as a viable solution to youth unemployment and the high cost of college tuition. Chambers anticipates more benefits being made available to companies offering registered apprenticeship programs in the near future.

Serving on the Council also provides access to answers that Chambers would like to pass along to other manufacturers,

“There are rumors that the state of Pennsylvania is not in compliance with the federal regulations that were established in 2008. We ARE in compliance. The state of Pennsylvania and the Federal Office of Apprenticeships have a formal agreement in place.”

This is good news for registered Pennsylvania apprenticeship programs, because once the pipeline of available federal money starts to flow, compliant companies will be eligible.

The State of Pennsylvania is in a transition stage right now with the federal office of apprenticeship transferring control of apprenticeship programs completely to the state. PA has a newly appointed director of apprenticeship, Eric Ramsey, who is based in Harrisburg, that will lead the transition. It is clear that this is an area that will be growing rapidly in the coming months and years— not just in Pennsylvania, but across the country.

While a training program is an initial investment in your employees, companies like Oberg have seen the long term benefits. According to Chambers, “You can’t cut corners when it comes to developing your people. It’s strictly a pay me now or pay me later situation.”



STATES WHICH OFFER TAX CREDITS TO EMPLOYERS FOR HIRING APPRENTICES

NTMA Pittsburgh Chapter newsletter, Precision Pittsburgh, compiled the following list of states offering tax credits to employers for hiring apprentices from state government and legislative websites:

ARKANSAS

Employers hiring a youth apprentice shall be given a credit in the amount of \$2,000 or 10 percent of the wages earned by the youth apprentice, whichever is less, against the tax imposed by the Arkansas Income Tax act.

CONNECTICUT

Any taxpayer who employs an apprentice enrolled and registered under the terms of a qualified manufacturing program is entitled to a tax credit for each eligible apprentice of up to \$4,800.00 maximum or 50% of actual wages, whichever is less, provided such apprenticeships meet state requirements.

GUAM

Any business that employs apprentices may receive a tax credit against its business privilege tax liability equal to 50 percent of all eligible costs paid or incurred by a program participant to train an apprentice. Eligible costs include direct wages and benefits of the apprentice, instructor costs, training costs and personal protective equipment costs.

LOUISIANA

Any program sponsor (employer/contractor) who pays the wages of an apprentice that is registered with the Louisiana Workforce Commission, Apprenticeship Division may receive a tax credit equal to \$1/hour worked per calendar year, with a maximum allowable amount for each apprentice of \$1,000/year.

MISSOURI

The Youth Opportunity Program offers 50 percent tax credits for monetary contributions and wages paid to youth in an approved internship, apprenticeship or employment project, and 30% tax credits for property or equipment contributions used specifically for the project.

NEVADA

Exempts from taxation all qualified real and personal property of an apprenticeship program. Title 32 Revenue and Taxation, Chapter 361 Property Tax, NRS 361.106

RHODE ISLAND

Employers that hire apprentices in certain manufacturing occupations may be eligible for a tax credit of 50 percent of actual wages or \$4,800, whichever is less.

SOUTH CAROLINA

Eligible businesses can receive a tax credit of \$1,000 for each registered apprentice employed for at least seven months during each year of an apprentice's program, for up to four years of such a program.

TENNESSEE

Taxpayers that employ an apprentice can receive a tax credit in an amount equal to \$2,000 or 10 percent of the wages earned by an apprentice pursuant to this act, whichever is less.

VIRGINIA

Employers may claim a tax credit for providing eligible worker retraining to qualified employees including apprentices that are approved by the Virginia Apprenticeship Council. The credit is 30 percent of all training costs through a community college, or up to \$100 annual credit for each employee if incurred at a private school.

WEST VIRGINIA

Employers may claim a tax credit for hiring apprentices in the construction trades. The credit may not exceed \$1000 or 50 percent of the actual wages paid in the tax year for the apprenticeship.

States that Offer Tuition Support for Registered Apprentices

CALIFORNIA

Funds allow community colleges to provide most instruction for apprenticeship programs.

DELAWARE

The Adult Education and Work Force Training Grant portion of HB #200 provides funds to Vocational Technical Schools to support tuition for registered apprentices.

FLORIDA

The Florida Legislature provides funding for registered apprentices in Local Education Agencies, school districts and state colleges through the Florida General Appropriations Act for The Florida Department of Education. The funds come from the General Revenue Fund and Trust funds for Workforce Education.

GUAM

Seventy percent (70%) of its Manpower Development Fund is allocated to the Apprenticeship Training Program at the Guam Community College to be expended exclusively to fund the administrative and instructional costs for the operation of the apprenticeship training programs; advertising and outreach programs for the promotion of the apprenticeship training programs; and direct financial assistance to students enrolled in the apprenticeship program.

INDIANA

The state created a special employment and training fund, IC 22-4-25-1, from the penalties and interest from the Unemployment Insurance system to fund various training programs. Ivy Tech Community College receives funds to train apprentices in joint labor-management apprenticeship programs. Funds are also

used to pay instructors for general education towards an Associate's degree and journey worker upgrade courses.

IOWA

The Iowa Department of Economic Development funds \$1 million a year to support Registered Apprenticeship through the Iowa Jobs Training Program (260F). It provides job training services to current employees of eligible businesses that are located in the state. Businesses can work with their local Iowa community college, which will assess training needs, determine the availability of funds and provide training. Funds go to businesses, not apprentices.

MAINE

Maine Revised Statutes Title 26, §3211, 6-A states that the Maine Department of Labor "shall underwrite 50 percent of tuition costs for apprentices in good standing at public educational institutions and provide training cost assistance to sponsor groups in accordance with sponsor policies.

TENNESSEE

The state offers tuition assistance up to \$11,600 for two years (\$5,800 per year) at the schools, institutions, and entities governed by the Tennessee Board of Regents and the University of Tennessee Board of Trustees, as well as state certified apprenticeship programs. Tuition assistance benefits are available for a two-year period beginning when an employee is separated due to a reduction in force.

TEXAS

The Texas Workforce Commission provides funds to local public educational institutions to support the costs of related classroom instruction in registered apprenticeship training programs. Local education agencies act as fiscal agents for registered apprenticeship training programs.

WASHINGTON STATE

Registered apprentices may be given a 50 percent tuition reduction at community and technical colleges. The State Board for Community and Technical Colleges issues policy on tuition and fee rates annually.

WISCONSIN

Apprentices pay \$120 per credit (36 hours). The 144 hours of related instruction per year requirement costs \$480. Apprentices are paid their hourly wage to attend class and in some cases tuition is reimbursed by sponsors or joint training funds.



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I'm not saying to hire us. We're not the right fit for everyone.

But for Pete's sake (not mine), every company should experiment with an independent, third-party facilitator for a meeting, retreat or conference.

I cannot tell you how many times I've heard employees complain about their boss, management, or other leadership team members. Hell, I've done it. But any employee that's ever complained about a leader (which is all of us) walks into a meeting or retreat with some level of skepticism, often with thoughts of "What are they going to tell us this time," "Here we go again," or my favorite, "Team building? Are you serious? Where's the bar?"

As a third party to dozens of businesses, I witness firsthand the steep uphill battle that leaders face in running their own meetings. Will their words sink in? Can they effectively facilitate discussion within their own team? Will the team be truly open and honest in a group session led by its leader?

So often, the answer to those questions is "no."

There lies HUGE pain and tons of wasted money in ineffective, poorly-run meetings or retreats where a CEO is tuned out by the team while he or she passionately recites a vision or agenda that nobody hears. Or, in some cases, the discussion is good but the team is too deep in the trees to see the forest, and an outside perspective is needed.

Think about the cost of a two-day retreat/meeting for just 10 people:

- 10 salaries in captive in a room, rather than selling, marketing, creating or delivering your product or service
- Cost of a meeting venue with A.V., white boards, flip charts, etc.
- Cost of at least one breakfast, lunch and dinner. Don't forget drinks, too.
- Flying people in from out of town? Factor in flights, hotel rooms, rental cars and airport parking.

The combined salaries in the room is


what really gets me. With that included, you are talking about potentially tens of thousand dollars to get 10 people together for only two days.

If that's the case, the meeting **ABSOLUTELY NEEDS** to be effective to be worth your investment. And if you feel anything, even way down in your gut, that makes you think it may not be ultra-efficient, contact a third-party facilitator. The risk of wasting that kind of money is too great.

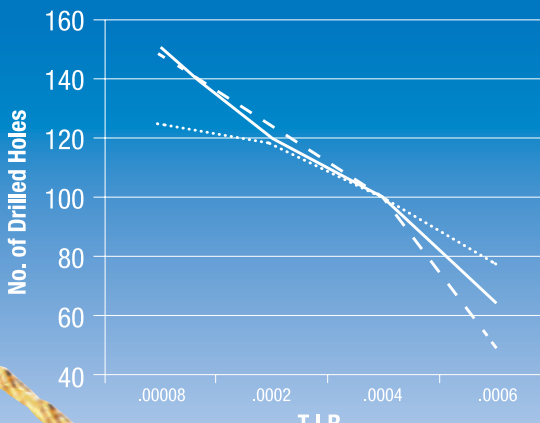
Instead of rolling the dice, utilize a facilitator at least once. Use someone you trust, or who comes highly regarded by someone you trust. Maybe it's a path you'll continue to pursue, or maybe one time is enough to empower you with the tools to take the reins.

Don't set fire to your money. Light a fire in your team.





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